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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for detecting the presence of a single target nucleic acid molecule in a sample, said method comprising:

providing a sample containing at least one target nucleic acid molecule to be amplified and constituents for enabling amplification of the target nucleic acid molecule;

loading the sample into a sample chamber, said sample chamber including a device for retaining a reaction product of amplification of a single target nucleic acid molecule of said sample such that a reaction product of the amplification of the single target nucleic acid molecule attains a detectable concentration within at least a portion of said sample chamber after a single round of amplification when subjected to a homogeneous amplification assay;

subjecting the sample in said sample chamber to a homogeneous amplification assay including a single round of amplification under conditions such that amplification of said at least one target nucleic acid molecule occurs and the reaction product of the amplification of a single target nucleic acid molecule of said sample attains a detectable concentration within said at least a portion of said sample chamber after said single round of amplification; and

detecting the reaction product of said single target nucleic acid molecule after said single round of amplification.

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2. (currently amended) A method for detecting the presence of a single target nucleic acid molecule in a sample, said method comprising:

providing a sample containing at least one target nucleic acid molecule to be amplified and constituents for enabling amplification of the target nucleic acid molecule;

loading the sample into a sample chamber, said sample chamber including means for retaining a reaction product of amplification of a single target nucleic acid molecule of said sample such that a reaction product of the amplification of the single target nucleic acid molecule attains a detectable concentration within at least a portion of said sample chamber after a single round of amplification when subjected to a homogeneous amplification assay;

subjecting the sample to a homogeneous amplification assay including a single round of amplification under conditions such that amplification of said at least one target nucleic acid molecule occurs and the reaction product of the amplification of a single target nucleic acid molecule of said sample attains a detectable concentration within said at least a portion of said sample chamber after said single round of amplification; and

detecting the reaction product of said single target nucleic acid molecule after said single round of amplification.

3. (currently amended) A method for detecting the presence of a single target nucleic acid molecule in a sample, said method comprising:

loading a sample into a sample chamber, said sample comprising constituents for enabling amplification of a target nucleic acid molecule, said sample chamber including a device for retaining a reaction product of amplification of a single target nucleic acid molecule of said sample such that a reaction product of the amplification of the single target nucleic acid molecule attains a detectable concentration within at least a portion of said

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sample chamber after a single round of amplification when subjected to a homogeneous amplification assay;

subjecting the sample in said sample chamber to a homogeneous amplification assay including a single round of amplification under conditions such that amplification of said at least one target nucleic acid molecule occurs and the reaction product of the amplification of a single target nucleic acid molecule of said sample attains a detectable concentration within said at least a portion of said sample chamber after said single round of amplification; and

detecting the reaction product of said single target nucleic acid molecule after said single round of amplification.

4. (currently amended) A method for detecting the presence of a single target nucleic acid molecule in a sample, said method comprising:

loading a sample into a sample chamber, said sample comprising constituents for enabling amplification of a target nucleic acid molecule, said sample chamber including means for retaining a reaction product of amplification of a single target nucleic acid molecule of said sample such that a reaction product of the amplification of the single target nucleic acid molecule attains a detectable concentration within at least a portion of said sample chamber after a single round of amplification when subjected to a homogeneous amplification assay;

subjecting the sample to a homogeneous amplification assay including a single round of amplification under conditions such that amplification of said at least one target nucleic acid molecule occurs and the reaction product of the amplification of a single target nucleic acid molecule of said sample attains a detectable concentration within said at least a portion of said sample chamber after said single round of amplification; and

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detecting the reaction product of said single target nucleic acid molecule after said single round of amplification.

5. (new) A method as recited in claim 1, wherein said reaction product of said amplification of said single target nucleic acid molecule of said sample attains a detectable concentration within said portion of said sample chamber after said single round of amplification.

6. (new) A method as recited in claim 2, wherein said reaction product of said amplification of said single target nucleic acid molecule of said sample attains a detectable concentration within said portion of said sample chamber after said single round of amplification.

7. (new) A method as recited in claim 3, wherein said reaction product of said amplification of said single target nucleic acid molecule of said sample attains a detectable concentration within said portion of said sample chamber after said single round of amplification.

8. (new) A method as recited in claim 4, wherein said reaction product of said amplification of said single target nucleic acid molecule of said sample attains a detectable concentration within said portion of said sample chamber after said single round of amplification.